

STATUS OF CLAIMS

1. (Currently Amended) A device for crystallising plastic material, ~~in particular polyethylene terephthalate,~~ comprising a treatment space (12) for accommodating the plastic material in the shape of pieces or pellets, said treatment space (12) being able to be charged with plastic material via at least one feed aperture (14) and discharged by at least one discharge aperture (19); a feed device (15) for a treatment gas via a floor region (16) of the treatment space (12) and at least one upright partition wall (13) provided in the treatment space (12) for dividing the treatment space (12) into at least two compartments (12', 12'') which are interconnected via a free space (18) near a bottom of said partition for conveying the plastic material from one compartment (12', 12'') to another compartment (12', 12'') so that from the feed aperture (14) to the discharge aperture (19) the plastic material passes in opposite directions in two compartments along a predefined, substantially vertical path (21); wherein the two compartments (12', 12'') are provided in an at least approximately rotationally-symmetrical housing (11).

2. (Previously Presented) A device according to claim 1, wherein due to the arrangement of free space or the free spaces (18) and the discharge opening (19) in the path (21) at different levels, the path zigzags or meanders through the treatment space.

3. (Previously Presented) A device according to claim 1 or 2, wherein at least one free space (18) is provided at the bottom of the associated partition wall (13), and that the discharge aperture (19) is provided near a top of the subsequent compartment (12'').

4. (Previously Presented) A device according to claims 1 or 2, wherein a partition wall (13) is provided below the feed aperture (14), for deflecting the incoming plastic material by means of a funnel section (13'), so as to deflect the material to a preceding compartment (12'), thus at least partially covering the subsequent compartment (12'') by the funnel section (13').

5. (Currently Amended) A device according to claims 1 or 2, wherein the first compartment (12') takes up more than half, ~~preferably more than 2/3~~ of the area in top view of the treatment space (12) which is at least approximately rotationally-symmetrical, and that this first compartment (12') is followed by a second compartment (12'') which is accordingly smaller.

6. (Previously Presented) A device according to claims 1 or 2, wherein a monitoring arrangement such as an inspection glass (24) is associated with at least one compartment (12'').

7. (Previously Presented) A device according to claims 1 or 2, wherein the floor region of the treatment space (12) is the perforated floor (16) of a fluidised bed.

8. (Currently Amended) A method for treating plastic material, ~~in particular polyethylene terephthalate~~, in which the material which has a relatively low temperature is first crystallised during heating before said material is led to heating or condensation in a solid phase, in particular using a device according to claim 1 wherein the material is exposed to hot treatment gas for at least 10 minutes in at least two spaces (12', 12'') and thus for crystallisation is heated to a temperature exceeding 135 °C, and that said material subsequently, in a preheating space (31) comprising up to eight stages, is heated to a temperature of at least 185°C.

9. (Previously Presented) A method according to claim 8, wherein the hot treatment gas is admitted during crystallisation at a temperature of 165 to 185 degrees C.

10. (Currently Amended) A method according to claim 8 or 9, wherein for evening out the treatment and thus the product quality, the crystallised material is brought into the shape of a bulk material stream of four-sided, ~~in particular rectangular~~ cross-section of essentially even bulking across the cross-section, with treatment gas flowing from one side (L) of the four-sided cross-section.

19. (Previously Presented) A method of Claim 8 wherein the material is heated to temperature of approximately 140° - 180° for crystallization.

20. (Previously Presented) A method of Claim 8 wherein the pre-heating space comprises at least two stages.

21. (Previously Presented) A method of Claim 8 wherein the material in the pre-heating space is heated to a temperature of at least 200°C.

22. (Previously Presented) The method of Claim 21 wherein the material in the pre-heating space is heated to a temperature of approximately 220°C.

23. (Previously Presented) The method of Claim 11 wherein the ratio of the rectangular sides is in the range 1:3 to 1:10.

24. (Previously Presented) A method of Claim 16 wherein the duration is between 15 and 40 minutes.

25. (Previously Presented) A method of Claim 24 wherein the duration is between 20 and 30 minutes.

26. (Previously Presented) The method of Claim 17 wherein the duration is approximately 90 minutes.

New Claims

27. (New) The device of claim 1 wherein the crystallising plastic material is polyethylene terephthalate.

28. (New) The device according to claim 5 wherein the first compartment takes up more than 2/3 of the area in top view of the treatment space.

29. (New) The method according to claim 8, wherein the plastic material is polyethylene terephthalate.

30. (New) The method according to claim 8 or 9, wherein the cross-section is rectangular.

31. (New) The method according to claim 12, wherein the treatment gas is applied to an opposite side of the four-sided cross-section.